M2030 through M2034 Series

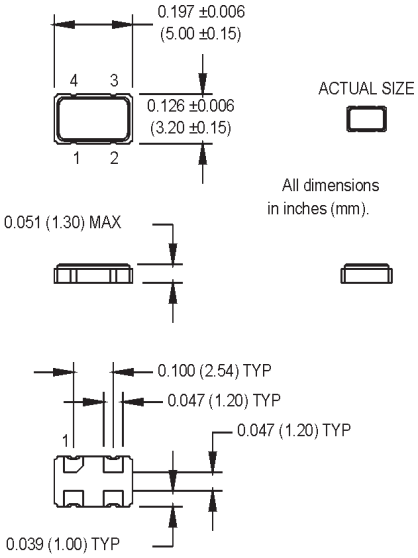
3.2 x 5.0 x 1.3 mm, HCMOS Compatible, Surface Mount Oscillators

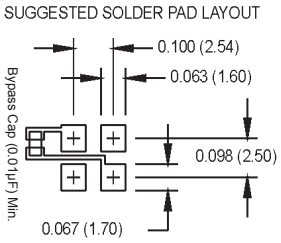
MtronPTI

Features

- Down to ±20 ppm stability
- Tristate or Standby function
- Ideal for WLAN and IEEE802.11 Applications
- Low power applications

RoHS Compliant





Pin Connections

PIN	Function
1	Standby/Tristate
2	Ground
3	Output
4	$+V_{DD}$

Ordering Information

M2034	2	3	T	C	N	00.0000 MHz

Product Series
M2030 = 1.8 V
M2031 = 2.5 V
M2032 = 2.85 V
M2033 = 3.0 V
M2034 = 3.3 V

Temperature Range
D: -10 °C to +70 °C **2:** -40 °C to +85 °C
6: -20 °C to +70 °C

Stability
3: ±100 ppm **4:** ±50 ppm **5:** ±35 ppm
6: ±25 ppm **8:** ±20 ppm*

Output Type
Q: Standby Function **T:** Tristate

Symmetry (Duty Cycle)
C: 45/55 CMOS **G:** 40/60 CMOS

Package/Lead Configurations
N: Leadless

Frequency (customer specified)

M2030Sxxx, M2031Sxxx, M2032Sxxx, M2033Sxxx & M2034Sxxx - Custom datasheets.

* (-10 °C to +70 °C only)

	Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Electrical Specifications	Frequency Range	F_O	1.5		80	MHz	See Note 1
	Frequency Stability	$\Delta F_T/F$	(See Ordering Information)			ppm	See Note 2
	Operating Temperature	T_A	(See Ordering Information)			°C	
	Input Voltage	V_{DD}	1.7	1.8	1.9	V	1.8 V
			2.38	2.5	2.62	V	2.5 V
			2.7	2.85	3.0	V	2.85 V
			2.85	3.0	3.15	V	3.0 V
			3.15	3.3	3.45	V	3.3 V
	Input Current	I_{DD}					
	1.500 MHz to 20.000 MHz				15	mA	V_{DD} = 3.3 V
	20.001 MHz to 50.000 MHz				20	mA	V_{DD} = 3.3 V
	50.001 MHz to 80.000 MHz				45	mA	V_{DD} = 3.3 V
	Symmetry (Duty Cycle)		45	50	55	%	1/2 V_{DD}
	Rise/Fall Time	T_R/T_F					
	1.5 MHz to 50.0 MHz				6	ns	10% to 90% V_{DD}
	> 50.0 MHz				4	ns	10% to 90% V_{DD}
	Logic "1" Level	V_{OH}	90			% V_{DD}	
	Logic "0" Level	V_{OL}			10	% V_{DD}	
	Output Current	I_{OH}	-2			mA	
		I_{OL}	+2			mA	
	Output Load				15	pF	
	Startup Time			5	10	ms	
	Standby Current				10	µA	
	Standby/Tristate Function		Pin 1 High (80% V_{DD} min) or Floating: Clock Signal Output Pin 1 Low (20% V_{DD} max): Output Disables to High Impedance				
	Output Disable Time				150	ns	
	Output Enable Time				5	ms	
Environmental	Shock	MIL-STD-202, Method 213, Condition C (100 g)					
	Vibration	MIL-STD-202, Methods 201 & 204 (10 g from 10 Hz to 2000 Hz)					
	Max Soldering Conditions	+260 °C for 10 seconds maximum					
	Solderability	Per EIAJ-STD-002					
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm.cc/s of helium)					

1. Consult factory for available frequencies in this range.
2. Inclusive of calibration, deviation over temperature, supply voltage change, load change, shock, vibration, and aging.

MtronPTI Lead Free Solder Profile